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955 L'ENFANT PLAZA NORTH, S.W.

WASHINGTON, D. C. 20024

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SUBJECT: Trip Report - Twenty-Second AAP
Flight Operations Plan (FOP)
Meeting, MSC, January 10, 1969 -
Case 610

DATE: January 16, 1969

FROM: D. J. Belz

MEMORANDUM FOR FILE

The twenty-second AAP Flight Operations Plan (FOP) Meeting was held at MSC on January 10, 1969. This memorandum summarizes several items of interest reported at that meeting.

1. Lighting Requirements for LM-A Rendezvous

Astronaut Paul Weitz presented the flight crew requirement for solar lighting during the LM-A/ATM unmanned rendezvous with the Cluster: the LM-A/ATM must be directly illuminated by the sun from the time it approaches within a mile of the Cluster until it has been brought to a station-keeping position 50 feet from the Cluster. After station-keeping has been achieved, floodlights on the spacecraft will provide adequate illumination to permit completion of docking.

2. Service Module (SM) RCS Propellant Loading

North American Rockwell reported that SM RCS propellant tanks must be launched either fully loaded or empty. Partially filled tanks are not qualified for the launch environment: there is a possibility that accelerations during ascent to orbit may damage tank bladders unless they are full. This implies that initial SM RCS propellant loading must be done in half-shelf, i.e. 300 lb, increments.

3. Restartable J-2 Engine for AAP-2 S-IVB Stage

Astronaut Weitz requested that MSFC provide a presentation on performance gains and development effort that would result from implementing a restart capability in the AAP-2 S-IVB stage. The reason given for the request was to: (a) develop an alternative to circularizing the Workshop orbit with the SM RCS and (b) to determine whether stowage items presently assigned to AAP CSM's might be accommodated on an "uprated" AAP-2 launch vehicle. MSFC will comply by scheduling a presentation at the next Mission Requirements Panel Meeting.

4. Mission Constraints Document

The FOP group, chaired by W. E. Koons - MSC/FA, has proposed the establishment of a Mission Constraints Document to define overall systems limitations pertinent to individual AAP flights. Early editions of the proposed document would provide

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a comprehensive guide for flight planners; the final update for each mission, issued 15 months prior to launch, would provide a basis for establishing the mission rules under which the flight will be conducted. A preliminary list of constraints is scheduled for presentation at the next FOP meeting.

Planning for the implementation of this document has thus far been carried out exclusively within MSC; the extent of MSFC participation in the preparation and approval of the document has yet to be determined by the two Centers.

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D. J. Belz